

Claims:

1. A method of switching a source for an audiovisual program configured for distribution among a plurality of user terminals, comprising:
 - receiving a first real-time digital bitstream and a second real-time digital bitstream, said source being said first real-time digital bitstream;
 - receiving a request from a remote controller operative to switch said source of said audiovisual program;
 - switching said source to said second real-time digital bitstream in response to said request; and
 - adjusting time stamp data in said second real-time digital bitstream to provide a continuous time base for said audiovisual program.
2. The method of claim 1, further comprising:
 - returning said source to said first real-time digital bitstream; and
 - adjusting time stamp data in said first real-time digital bitstream to maintain said continuous time base for said audiovisual program.
3. The method of claim 2, wherein said request includes a substitution period, and wherein said source is returned to said first real-time digital bitstream upon expiration of said substitution period.
4. The method of claim 2, wherein said request indicates an indefinite substitution period, wherein the method further comprises receiving a return request from said remote controller operative to return said source to said first real-time digital bitstream, and wherein said source is returned to said first real-time digital bitstream in response to said return request.
5. The method of claim 1, wherein said request indicates an indefinite substitution period, and wherein the method further comprises:
 - receiving an additional real-time digital bitstream;
 - receiving an additional request from said remote controller operative to switch said source of said audiovisual program;

switching said source to said additional real-time digital bitstream in response to said additional request; and

adjusting time stamp data in said additional real-time digital bitstream to maintain said continuous time base for said audiovisual program.

6. The method of claim 5, further comprising:

returning said source to said first real-time digital bitstream; and

adjusting time stamp data in said first real-time digital bitstream to maintain said continuous time base for said audiovisual program.

7. The method of claim 1, wherein said request is in a format compliant with SCTE-30.

8. The method of claim 1, wherein each of said first real-time digital bistream and said second real-time digital bitstream comprises a live feed from a feed network.

9. The method of claim 1, wherein said switching comprises:

splicing at least one of an audio stream, a video stream, and an ancillary data stream in said second real-time digital bitstream with a respective at least one of an audio stream, a video stream, and an ancillary data stream in said first real-time digital bitstream;

10. The method of claim 9, wherein said splicing is performed without decoding said first real-time digital bitstream and said second real-time digital bitstream.

11. The method of claim 9, further comprising:

adjusting the bit-rate of said second real-time digital bitstream for a pre-defined period in response to said splicing.

12. The method of claim 1, wherein said adjusting step comprises:

obtaining a first time stamp for said first real-time digital bitstream and a second time stamp for said second real-time digital bitstream;

computing an offset using said first time stamp and said second time stamp; and

adding said offset to additional time stamps within said second real-time digital bitstream.

13. The method of claim 12, further comprising:

identifying a first time-of-measurement for said first time stamp and a second time-of-measurement for said second time stamp;

wherein said offset is further computed using said first time-of-measurement and said second time-of-measurement.

14. The method of claim 13, wherein said offset is computed as:

$$TOM_2 - TOM_1 + TS_1 - TS_2,$$

where TOM_2 represents said second time-of-measurement, TOA_1 represents said first time-of-measurement, TS_1 represents said first time stamp, and TS_2 represents said second time stamp.

15. The method of claim 13, wherein each of said first time stamp and said second time stamp is a program clock reference (PCR) time stamp.

16. Apparatus for switching a source of an audiovisual program configured for distribution among a plurality of user terminals, comprising:

a first interface for receiving a first real-time digital bitstream;

a second interface for receiving a second real-time digital bitstream;

a third interface for receiving request data from a remote controller, said request data operative to switch said source of said audiovisual program;

a switch circuit for switching said source between said first real-time digital bitstream and said second real-time digital bitstream in response to said request data; and

a time stamp adjustment circuit for adjusting time stamp data in a bitstream mapped to said audiovisual program to provide a continuous time base therefor.

17. The apparatus of claim 16, wherein said switch circuit is configured to switch said source to said second real-time digital bitstream in response to a request from said remote controller for an indefinite period, and to return said source to said first real-time digital bitstream in response to a return request from said remote controller.

18. The apparatus of claim 16, wherein said switch circuit is configured to switch said source to said second real-time digital bitstream in response to a request from said remote controller for a substitution period defined by said request, and to return said source to said first real-time digital bitstream in response to expiration of said substitution period.

19. The apparatus of claim 16, wherein said third interface is configured to receive request data in a format compliant with SCTE-30.

20. A distribution system for providing an audiovisual program to a plurality of user terminals, comprising:

- a first interface for receiving a first real-time digital bitstream;
- a second interface for receiving a second real-time digital bitstream;
- a remote controller for generating request data operative to switch a source of said audiovisual program;
- a switching device, coupled to said remote controller, said first interface, and said second interface, said switching device including:
 - a switch circuit for switching said source between said first real-time digital bitstream and said second real-time digital bitstream in response to said request data; and
 - a time stamp adjustment circuit for adjusting time stamp data in a bitstream mapped to said audiovisual program to provide a continuous time base therefor.

21. The system of claim 20, wherein said remote controller is configured to generate said request data in a format compliant with SCTE-30.

22. The system of claim 20, wherein said remote controller is coupled to said switching device via a transmission control protocol/internet protocol (TCP/IP) network.

23. The system of claim 20, wherein each of said first real-time digital bitstream and said second real-time digital bitstream comprises a live feed from a feed network.

24. The system of claim 20, wherein said switch circuit is configured to switch said source to said second real-time digital bitstream in response to a request from said remote controller for an indefinite period, and to return said source to said first real-time digital bitstream in response to a return request from said remote controller.

25. The system of claim 20, wherein said switch circuit is configured to switch said source to said second real-time digital bitstream in response to a request from said remote controller for a substitution period defined by said request, and to return said source to said first real-time digital bitstream in response to expiration of said substitution period.

26. Apparatus for switching a source of an audiovisual program configured for distribution among a plurality of user terminals, comprising:

means for receiving a first real-time digital bitstream and a second real-time digital bitstream, said source being said first real-time digital bitstream;

means for receiving a request from a remote controller operative to switch said source of said audiovisual program;

means for switching said source to said second real-time digital bitstream in response to said request; and

means for adjusting time stamp data in said second real-time digital bitstream to provide a continuous time base for said audiovisual program.